

ATTACHMENT
REDLINED AMENDMENT

Claims As Amended

Please cancel claims 21-52 without prejudice or disclaimer.

Please add new claims 53-109 as follows:

53. (New) A driving apparatus for driving a driven device, comprising:
a motor including a rotating shaft;
an output unit coupled to the motor, wherein the output unit includes a decelerating mechanism for transmitting rotation of the rotating shaft, after decelerating, to the driven device, and wherein the decelerating mechanism is a worm gear mechanism including a worm shaft separated from the rotating shaft and a worm wheel meshed with the worm shaft;
a clutch located between the rotating shaft and the worm shaft, wherein the clutch allows transmission of rotation from the rotating shaft to the worm shaft and blocks transmission of rotation from the worm shaft to the rotating shaft; and
a compensating mechanism located between the rotating shaft and the worm shaft to compensate the misalignment between the rotating shaft and the worm shaft.
54. (New) The driving apparatus according to claim 53, wherein the clutch includes the compensating mechanism.
55. (New) The driving apparatus according to claim 53, wherein the clutch functions to block a movement of the decelerating mechanism based on force applied to the driven device.
56. (New) The driving apparatus according to claim 53, wherein the output unit comprises a unit housing for accommodating the worm gear mechanism, wherein the clutch comprises:
a driving rotor coupled to the rotating shaft for rotation integral therewith;
a driven rotor coupled to the worm shaft for rotation integral therewith, wherein the driven rotor is operatively coupled to the driving rotor;

a lock member for selectively allowing and blocking the rotation of the driven rotor; and
a clutch housing for accommodating at least the driven rotor and the lock member,
wherein the clutch housing is fixed to the unit housing such that the clutch
housing does not rotate relative to the unit housing.

57. (New) The driving apparatus according to claim 56, wherein the compensating mechanism allows the driving rotor to move in the radial direction relative to the clutch housing, thereby compensating the misalignment between the rotating shaft and the worm shaft.
58. (New) The driving apparatus according to claim 53, wherein the output unit comprises a unit housing for accommodating the worm gear mechanism, wherein the motor comprises:
a motor housing for supporting the rotating shaft;
a commutator fixed on the rotating shaft;
a brush holder located between the motor housing and the unit housing; and
a brush attached to the brush holder such that the brush is in contact with the commutator, wherein the brush holder is located between the clutch and the brush to separate the clutch from the brush.
59. (New) The driving apparatus according to claim 58, wherein the motor housing has an open end into which the brush holder is fitted.
60. (New) The driving apparatus according to claim 58, wherein the clutch comprises:
a driving rotor coupled to the rotating shaft for rotation integral therewith;
a driven rotor coupled to the worm shaft for rotation integral therewith, wherein the driven rotor is operatively coupled to the driving rotor;
a lock member for selectively allowing and blocking the rotation of the driven rotor; and
a clutch housing for accommodating the driving rotor, the driven rotor and the lock member, wherein the clutch housing is fixed to the brush holder such that the clutch housing does not rotate relative to the brush holder.

61. (New) The driving apparatus according to claim 56, wherein the lock member is located between the driven rotor and the clutch housing to be selectively held between and released from the driven rotor and the clutch housing, wherein, when the lock member is held between the driven rotor and the clutch housing, the lock member blocks rotation of the driven rotor relative to the clutch housing, and wherein, when the lock member is released from the driven rotor and the clutch housing, the lock member allows rotation of the driven rotor relative to the clutch housing.

62. (New) The driving apparatus according to claim 56, wherein the lock member is located between the driven rotor and the clutch housing to be selectively held between and released from the driven rotor and the clutch housing, wherein, when the lock member is held between the driven rotor and the clutch housing, the clutch blocks transmission of rotation from the worm shaft to the rotating shaft, and wherein, when the lock member is released from the driven rotor and the clutch housing, the clutch allows transmission of rotation from the rotating shaft to the worm shaft.

63. (New) The driving apparatus according to claim 56, wherein the driven rotor is formed integrally with the worm shaft.

64. (New) The driving apparatus according to claim 56, wherein a bearing for supporting the rotating shaft is attached to the clutch housing.

65. (New) The driving apparatus according to claim 56, wherein the lock member comprises a plurality of rolling bodies for circulating about an axial center of the driving rotor to the accompaniment of rotation of the driving rotor.

66. (New) The driving apparatus according to claim 65, wherein the clutch comprises a support member for supporting the rolling bodies to hold a relative positional relationship of the rolling bodies.

67. (New) The driving apparatus according to claim 66, wherein a bearing for supporting the rotating shaft is arranged integral with the support member.
68. (New) The driving apparatus according to claim 66, wherein the bearing for supporting the worm shaft is arranged integral with the support member.
69. (New) The driving apparatus according to claim 56, wherein the clutch housing unremovably accommodates the driving rotor, the driven rotor and the lock member, wherein the clutch is assembled as a single unit.
70. (New) The driving apparatus according to claim 56, wherein the driving rotor is made of a resin material, and the driven rotor is made of a metal material.
71. (New) The driving apparatus according to claim 56, wherein a spherical member is located between the driven rotor and the driving rotor to prevent the driven rotor from being pressed against the driving rotor in the axial direction of the driven rotor.
72. (New) The driving apparatus according to claim 56, wherein the driven rotor contacts an end face of the rotating shaft through a ball in the axial direction of the driven rotor, and the driven rotor can directly contact the driving rotor in the rotating direction of the driven rotor.
73. (New) The driving apparatus according to claim 56, wherein the driven rotor has a hemispherical protrusion, the driven rotor contacts an end face of the rotating shaft through the hemispherical protrusion in the axial direction of the driven rotor, and the driven rotor can directly contact the driving rotor in the rotating direction of the driven rotor.
74. (New) The driving apparatus according to claim 56, wherein a ball is received by the driving rotor, and the driven rotor contacts the ball in the axial direction of the driven rotor.

75. (New) The driving apparatus according to claim 53, wherein a ball is located between an end face of the rotating shaft and the clutch.
76. (New) The driving apparatus according to claim 53, wherein the driven device is a lifting mechanism for moving up and down a windowpane.
77. (New) A driving apparatus for driving a driven device, comprising:
a motor, wherein the motor includes:
a rotating shaft;
a motor housing for supporting the rotating shaft;
a commutator fixed on the rotating shaft;
a brush holder; and
a brush attached to the brush holder such that the brush is in contact with the commutator;
an output unit coupled to the motor and facing the brush holder, wherein the output unit includes a decelerating mechanism and a unit housing for accommodating the decelerating mechanism, wherein the decelerating mechanism transmits rotation of the rotating shaft, after decelerating, to the driven device, and wherein the decelerating mechanism is a worm gear mechanism including a worm shaft separated from the rotating shaft and a worm wheel meshed with the worm shaft; and
a clutch located between the rotating shaft and the worm shaft, wherein the clutch allows transmission of rotation from the rotating shaft to the worm shaft and blocks transmission of rotation from the worm shaft to the rotating shaft, and wherein the brush holder is located between the clutch and the brush to separate the clutch from the brush.
78. (New) The driving apparatus according to claim 77, wherein the motor housing has an open end into which the brush holder is fitted.

79. (New) The driving apparatus according to claim 77, wherein the clutch functions to block a movement of the decelerating mechanism based on force applied to the driven device.
80. (New) The driving apparatus according to claim 77, wherein the clutch comprises:
a driving rotor coupled to the rotating shaft for rotation integral therewith;
a driven rotor coupled to the worm shaft for rotation integral therewith, wherein the
driven rotor is operatively coupled to the driving rotor;
a lock member for selectively allowing and blocking the rotation of the driven rotor; and
a clutch housing for accommodating at least the driven rotor and the lock member.
81. (New) The driving apparatus according to claim 80, wherein the clutch housing is fixed to the unit housing such that the clutch housing does not rotate relative to the unit housing.
82. (New) The driving apparatus according to claim 80, wherein the clutch housing is fixed to the brush holder such that the clutch housing does not rotate relative to the brush holder.
83. (New) The driving apparatus according to claim 80, wherein the lock member is located between the driven rotor and the clutch housing to be selectively held between and released from the driven rotor and the clutch housing, wherein, when the lock member is held between the driven rotor and the clutch housing, the lock member blocks rotation of the driven rotor relative to the clutch housing, and wherein, when the lock member is released from the driven rotor and the clutch housing, the lock member allows rotation of the driven rotor relative to the clutch housing.
84. (New) The driving apparatus according to claim 80, wherein the lock member is located between the driven rotor and the clutch housing to be selectively held between and released from the driven rotor and the clutch housing, wherein, when the lock member is held between the driven rotor and the clutch housing, the clutch blocks transmission of rotation from the worm shaft to the rotating shaft, and wherein, when the lock member is released from the driven rotor

and the clutch housing, the clutch allows transmission of rotation from the rotating shaft to the worm shaft.

85. (New) The driving apparatus according to claim 80, wherein the driven rotor is formed integrally with the worm shaft.

86. (New) The driving apparatus according to claim 80, wherein a bearing for supporting the rotating shaft is attached to the clutch housing.

87. (New) The driving apparatus according to claim 80, wherein the lock member comprises a plurality of rolling bodies for circulating about an axial center of the driving rotor to the accompaniment of rotation of the driving rotor.

88. (New) The driving apparatus according to claim 87, wherein the clutch comprises a support member for supporting the rolling bodies to hold a relative positional relationship of the rolling bodies.

89. (New) The driving apparatus according to claim 88, wherein a bearing for supporting the rotating shaft is arranged integral with the support member.

90. (New) The driving apparatus according to claim 88, wherein the bearing for supporting the worm shaft is arranged integral with the support member.

91. (New) The driving apparatus according to claim 80, wherein the clutch housing unremovably accommodates the driving rotor, the driven rotor and the lock member, wherein the clutch is assembled as a single unit.

92. (New) The driving apparatus according to claim 80, wherein the driving rotor is made of a resin material, and the driven rotor is made of a metal material.

93. (New) The driving apparatus according to claim 80, wherein the driven rotor contacts an end face of the rotating shaft through a ball in the axial direction of the driven rotor, and the driven rotor can directly contact the driving rotor in the rotating direction of the driven rotor.
94. (New) The driving apparatus according to claim 80, wherein the driven rotor has a hemispherical protrusion, the driven rotor contacts an end face of the rotating shaft through the hemispherical protrusion in the axial direction of the driven rotor, and the driven rotor can directly contact the driving rotor in the rotating direction of the driven rotor.
95. (New) The driving apparatus according to claim 80, wherein a ball is received by the driving rotor, and the driven rotor contacts the ball in the axial direction of the driven rotor.
96. (New) The driving apparatus according to claim 77, wherein a ball is located between an end face of the rotating shaft and the clutch.
97. (New) The driving apparatus according to claim 77, wherein the driven device is a lifting mechanism for moving up and down a windowpane.
98. (New) A driving apparatus for driving a driven device, comprising:
a motor including a rotating shaft;
an output unit coupled to the motor, wherein the output unit includes a decelerating mechanism for transmitting rotation of the rotating shaft, after decelerating, to the driven device, and wherein the decelerating mechanism is a worm gear mechanism including a worm shaft separated from the rotating shaft and a worm wheel meshed with the worm shaft; and
a clutch located between the rotating shaft and the worm shaft, wherein the clutch includes:
a driving rotor coupled to the rotating shaft for rotation integral therewith;

a driven rotor coupled to the worm shaft for rotation integral therewith, wherein,
when the driving rotor rotates, the driving rotor directly contacts the driven rotor in the rotating direction of the driving rotor;
a lock member for selectively allowing and blocking the rotation of the driven rotor;
and
a clutch housing for accommodating at least the driven rotor and the lock member, wherein the lock member is located between the driven rotor and the clutch housing to be selectively held between and released from the driven rotor and the clutch housing, wherein, when the lock member is held between the driven rotor and the clutch housing, the clutch blocks transmission of rotation from the worm shaft to the rotating shaft, and wherein, when the lock member is released from the driven rotor and the clutch housing, the clutch allows transmission of rotation from the rotating shaft to the worm shaft.

99. (New) The driving apparatus according to claim 98, wherein the lock member comprises a plurality of rolling bodies for circulating about an axial center of the driving rotor to the accompaniment of rotation of the driving rotor, and

wherein the clutch comprises a support member located in the clutch housing, wherein the support member supports the rolling bodies to hold a relative positional relationship of the rolling bodies.

100. (New) A driving apparatus for driving a driven device, comprising:

a motor including a rotating shaft;

an output unit coupled to the motor, wherein the output unit includes a decelerating mechanism for transmitting rotation of the rotating shaft, after decelerating, to the driven device;

a clutch located between the rotating shaft and the decelerating mechanism, wherein the clutch allows transmission of rotation from the rotating shaft to the decelerating mechanism and blocks transmission of rotation from the decelerating mechanism to the rotating shaft; and

a ball located between an end face of the rotating shaft and the clutch.

101. (New) The driving apparatus according to claim 100, wherein the output unit includes a unit housing for accommodating the decelerating mechanism, wherein the clutch has a clutch housing fixed to the unit housing, and wherein an engaging mechanism is located between the unit housing and the clutch housing for blocking rotation of the clutch housing relative to the unit housing.

102. (New) The driving apparatus according to claim 100, wherein the motor includes a motor housing for supporting the rotating shaft, wherein the clutch has a clutch housing fixed to the motor housing, and wherein an engaging mechanism is located between the motor housing and the clutch housing for blocking rotation of the clutch housing relative to the motor housing.

103. (New) The driving apparatus according to claim 100, wherein the decelerating mechanism is a worm gear mechanism including a worm shaft coupled to the clutch and a worm wheel meshed with the worm shaft.

104. (New) The driving apparatus according to claim 103, wherein the clutch includes:
a driving rotor coupled to the rotating shaft for rotation integral therewith;
a driven rotor coupled to the worm shaft for rotation integral therewith, the driven rotor operatively coupled to the driving rotor; and
a lock member for selectively allowing and blocking the rotation of the driven rotor, wherein the driven rotor contacts the end face of the rotating shaft through the ball in the axial direction of the driven rotor.

105. (New) The driving apparatus according to claim 104, wherein the driven rotor can directly contact the driving rotor in the rotating direction of the driven rotor.

106. (New) A driving apparatus for driving a driven device, comprising:
a motor including a rotating shaft;

an output unit coupled to the motor, wherein the output unit includes a decelerating mechanism for transmitting rotation of the rotating shaft, after decelerating, to the driven device, and wherein the decelerating mechanism is a worm gear mechanism including a worm shaft separated from the rotating shaft and a worm wheel meshed with the worm shaft; and

a clutch located between the rotating shaft and the worm shaft, wherein the clutch allows transmission of rotation from the rotating shaft to the worm shaft and blocks transmission of rotation from the worm shaft to the rotating shaft,

wherein the clutch includes:

- a driving rotor coupled to the rotating shaft for rotation integral therewith;
- a driven rotor coupled to the worm shaft for rotation integral therewith, wherein the driven rotor is operatively coupled to the driving rotor;
- a lock member for selectively allowing and blocking the rotation of the driven rotor, wherein the lock member comprises a plurality of rolling bodies for circulating about an axial center of the driving rotor to the accompaniment of rotation of the driving rotor; and
- a support member for supporting the rolling bodies to hold a relative positional relationship of the rolling bodies.

107. (New) The driving apparatus according to claim 106, wherein the clutch includes a clutch housing for accommodating the driving rotor, the driven rotor, the lock member and the support member, wherein the lock member allows the driving rotor to rotate the driven rotor relative to the clutch housing when the driving rotor is rotated by the rotating shaft, and wherein the lock member is held between the driven rotor and the clutch housing to block the rotation of the driven rotor relative to the clutch housing when the driven rotor is rotated by the worm shaft.

108. (New) The driving apparatus according to claim 106, wherein a bearing for supporting the rotating shaft is arranged integral with the support member.

109. (New) The driving apparatus according to claim 106, wherein the bearing for supporting the worm shaft is arranged integral with the support member.